



Science Biology Chemistry Physics					
EYFS	Plants	Animals including humans	Everyday Materials	Seasonal Changes	Living things and their habitats
Nursery	Children to plant seeds and watch them grow. Children to pay attention to the changes in leaves on the trees.	Children to demonstrate awareness that a baby has different needs. Children to begin to make connections between the features of their family and other families. Children begin to notice differences between people.	Children to use their senses to explore both man made and natural materials both indoors and outdoors. Materials with different properties are carefully planned for to broaden children's sensory experiences: wet and dry sand and mud, water, water beads & ice, scented play doh & slime, shaving foam	Children to enjoy exploring and responding to different natural phenomena. Children to make the most of all opportunities presented by the weather. Lying in the sunshine and gazing at the clouds, jumping in puddles in the rain and building snowmen in the snow.	Children to show an interest in creatures they might find in the natural world. Children begin to show some awareness of where mini beasts live.
Pre-School	Children plant seeds and care for growing plants. Children understand the key features of the life cycle of a plant and an animal.	Children understand the key features of the life cycle of a plant and an animal.	Children use all their senses in hands on exploration of natural materials. Explore collections of materials with similar and/or different properties Children talk about the difference between materials and changes they notice. Children explore and talk about different forces they can feel. Children to explore magnets.		Children understand the key features of the life cycle of a plant and an animal.

Reception				Children learn about the changing seasons in the natural world and changing state of matter. Children explore the natural world around them, describing what they see, hear and feel whilst outside.	
KS1	Plants	Animals including humans	Everyday Materials	Seasonal Changes	Living things and their habitats
Year 1	Plants Identify and name a variety of common wild and garden plants Planting Beans Identify and describe the basic structure of a variety of common flowering plants. Terrific Trees Identify and name a variety of trees including deciduous and evergreen trees by identifying trees from their leaves Parts of Plants Identify and describe the basic structure of a variety of common flowering plants, including trees by making and labelling plant pictures. How Do Plants Grow? Observe closely, using simple equipment the growth of bean plants. Spring Term 2	My Body Identify, name, draw and label the basic parts of the human body through drawing and labelling a diagram of the body and songs, actions and rhymes Senses Detectives Say which part of the body is associated with each sense and use senses to compare different textures, sounds and smells. Perform simple tests in the context of investigating each of the five senses. Grouping Animals Identify and name a variety of common animals including, fish, amphibians, reptiles, birds and mammals including those that are kept as pets. Animal Bodies Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets What Do I Eat? Recognise, identify and name a variety of common animals that are carnivores, herbivores and omnivores. Summer Term	Distinguish between an object and the material from which it is made Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock Describe the simple physical properties of a variety of everyday materials Compare and group together a variety of everyday materials on the basis of their simple physical properties. Autumn Term	Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies. Spring Term 1	

Year 2	Observing Plants Observe closely using simple equipment by recording observations of a variety of plants in the local environment Seeds and Bulbs Observe and describe how seeds and bulbs grow into mature plants by planting seeds and bulbs Life Cycles Observe and describe how seeds and bulbs grow into mature plants What Do Plants Need? Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy by comparing the growth of seedlings under different conditions. Plants We Eat Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy by explaining what conditions plants need to grow well How Different Plants Grow Observe and describe how seeds and bulbs grow into mature plants by comparing the growth of seeds and bulbs. Spring Term	Basic Needs Find out about and describe the basic needs of animals, including humans, for survival (water, food and air), by identifying the ways that different animals meet their basic needs. Growing and Changing Notice that animals, including humans, have offspring which grow into adults, by learning about changes as they grow. Healthy Eating Describe the importance for humans of eating the right amounts of different types of food, by exploring food groups. Exercise Describe the importance for humans of exercise, by finding out why humans need to exercise. Hygiene Describe the importance for humans of hygiene, by learning about good hygiene habits. Autumn Term 1	Using Materials for a Purpose Identify and compare the suitability of materials including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses and be familiar with how some materials are used for more than one thing or different materials are used for the same thing. Changing Shapes Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. People who have developed useful new materials – John Dunlop, Charles Macintosh or John McAdam. Autumn Term 2		Living, Dead and Never Alive Explore and compare the differences between things that are living, dead, and things that have never been alive by thinking about life processes. Habitats Identify and name a variety of plants and animals in their habitats, by mapping a habitat and identifying its inhabitants. Microhabitats Identify and name a variety of plants and animals in their habitats, including microhabitats by identifying minibeasts in microhabitats. World Habitats Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, by researching habitats and the animals that live in them and how they depend on each other by considering the adaptations of animals. Food Chains Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food by making a variety of food chains Summer Term	
	Working Scientifically at KS1 ▪ Ask simple questions and recognise that they can be answered in different ways. ▪ Observe closely using simple equipment. ▪ Perform simple tests. ▪ Identify and classify. ▪ Use observations and ideas to suggest answers to questions. ▪ Gather and record data to help in answering questions. ▪ Record and communicate findings in a range of ways using simple scientific language.					
	Lower KS2	Plants	Animals including humans	Rocks	Light	Forces and magnets

Year 3	Functions, life and growth Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers; explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant; investigate the way in which water is transported within plants; explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. Summer Term	Nutrition Identify that animals including humans need the right type and amount of nutrition; some animals and humans have a Skeleton and muscles for support, protection and movement Autumn Term 1	Rocks Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties; Fossils Describe in simple terms how fossils are formed when things that have lived are trapped within rock; Soils Recognise that soils are made from rocks and organic matter. Spring Term 1	Light and shadows Recognise that they need light in order to see things; notice that light is reflected from surfaces; recognise that light from the sun can be dangerous; recognise that shadows are formed when the light from a light source is blocked by an opaque object; find patterns in the way that the size of shadows change. Autumn Term 2	Pushes and Pulls Compare how things move on different surfaces; notice that some forces need contact between two objects. Magnetism Recognise that magnetic forces can act at a distance; observe how magnets attract or repel each other and attract some materials and not others; compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials; Magnetic poles Describe magnets as having two poles; predict whether two magnets will attract or repel each other, depending on which poles are facing. Spring Term 2
	Living things and their habitats	States of matter	Sound	Electricity	Animals including humans
Year 4	Grouping Living Things Recognise that living things can be grouped in a variety of ways by sorting living things into a range of groups. Classification Keys Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment by creating classification keys. Local Habitat Survey Recognise that environments can change and that this can sometimes pose dangers to living things by identifying changes and dangers in the local habitat. Environmental Changes Recognise that environments can change and that this can sometimes pose dangers to living things by learning about environmental dangers.	Solid, Liquid or Gas? Compare and group materials together, according to whether they are solids, liquids or gases. Heating and Cooling Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) Evaporation and Condensation Identify the part played by evaporation and condensation in the water cycle by creating a model of the water cycle. Summer Term 1	Good Vibrations Identify how sounds are made, associating some of them with something vibrating. Hearing Sounds Recognise that vibrations from sounds travel through a medium to the ear Higher, Lower, Louder, Quieter Find patterns between the pitch of a sound and features of the object that produced it; find patterns between the volume of a sound and the strength of the vibrations that produced it; recognise that sounds get fainter as the distance from the sound source increases. Autumn Term 2	Appliances and Circuits Identify common appliances that run on electricity; construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers; Complete Circuits Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery; recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit; Conductors and Insulators Recognise some common conductors and insulators, and associate metals with being good conductors.	Digestive System Parts Describe the simple functions of the basic parts of the digestive system in humans in the context of identifying the parts of the digestive system system. Types and Functions of Teeth Identify the different types of teeth in humans and their simple functions by learning about different types of teeth. Food Chains Construct and interpret a variety of food chains, identifying producers, predators and prey by understanding food chains and the role of different plants and animals within them. Spring Term

Year 5		Summer Term 2			Autumn Term 1	
	Working Scientifically Lower KS2 (Y3 and Y4) - Ask relevant questions and use different types of scientific enquiries to answer them. - Set up simpler practical enquiries, comparative and fair tests. - Make systematic and careful observations and where appropriate, take accurate measurement, using a range of equipment including thermometers and data loggers. - Gather, record, classify and present data in a variety of ways to help in answering questions. - Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables. - Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions - Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions - Identify differences, similarities or changes related to simple scientific ideas and processes - Use straightforward scientific evidence to answer questions or to support their findings					
	Upper KS2	Living things and their habitats	Animals including humans	Properties and changes of materials	Earth and Space	Forces
		Life Cycles and Life Processes Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird; describe the life process of reproduction in some plants and animals. Summer Term 1	Journey To Old Age Describe the changes as humans develop to old age. See non-statutory guidance as well. Summer Term 2	Comparing and Grouping Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Compare a variety of materials and measure their effectiveness (e.g. hardness, strength, flexibility, solubility, transparency, thermal conductivity, electrical conductivity). Disappearing or Dissolving? Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. Separating Mixtures Use knowledge of solids, liquids and gases to decide how mixtures might be	Spherical Bodies Describing the Sun, Earth and Moon as approximately spherical bodies by understanding how this knowledge has been attained. The Planets Describing the movement of the Earth, and other planets, relative to the Sun in the solar system by learning the order of the planets and how they move in the solar system. Geocentric Versus Heliocentric Describing the movement of the Earth, and other planets, relative to the Sun in the solar system by examining the geocentric and heliocentric theories. Night and Day Using the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky by examining why the sun appears to move and the arguments for the Earth's rotation Movement of the Moon Describing the movement of the Moon relative to the Earth by	Gravity Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object; Resistance Identify the effects of air resistance, water resistance and friction, that act between moving surfaces; Increasing The Effect recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. Spring Term 2

Year 6			separated, including through filtering, sieving and evaporating. Irreversible Changes To explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda by identifying and observing irreversible chemical changes. Autumn Term	explaining how the Moon orbits the Earth. Spring Term 1	
	Living things and their habitats	Animals including humans	Evolution and inheritance	Light	Electricity
	Common Characteristics Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals; give reasons for classifying plants and animals based on specific characteristics Summer Term 1	The Circulatory System Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood; recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function; describe the ways in which nutrients and water are transported within animals, including humans. Transporting Water and Nutrients Describe the ways in which nutrients and water are transported within animals, including humans in the context of the human body. Healthy Lifestyle Recognise the impact of diet and exercise on the way their bodies function by describing the effects of a healthy lifestyle. Spring Term	Adaptation identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. Inheritance Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents in the context of inheritance. Changes Over Time Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago in the context of the evolution of plants and animals. Autumn Term 1	Travelling Light Recognise that light appears to travel in straight lines; use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye; How We See explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes; Casting Shadows Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. Autumn Term 2	Light and Bright Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit; compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches; use recognised symbols when representing a simple circuit in a diagram. Summer Term 2
Working Scientifically Upper KS2 (Y5 and Y6) - Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. - Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate. - Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. - Use test results to make predictions to set up further comparative and fair tests. - Reporting and presenting findings from enquiries, including conclusions, casual relationships and explanations of and degree of trust in results in oral, written forms such as displays and other presentations. - Identify scientific evidence that has been used to support or refute ideas or arguments.					

